



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

21171 7590 02/03/2010

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

ATALA, JAMIE JO

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 02/03/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/679,069

10/05/2000

Chong-Mok Park

1317.1068

7738

TITLE OF INVENTION: VIDEO STREAM PROCESSING METHOD FOR TIME-DELAYED VIEWING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	05/03/2010

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

21171 7590 02/03/2010

**STAAS & HALSEY LLP**  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/679,069 10/05/2000 Chong-Mok Park 1317.1068 7738

TITLE OF INVENTION: VIDEO STREAM PROCESSING METHOD FOR TIME-DELAYED VIEWING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
-------------	--------------	---------------	---------------------	----------------------	------------------	----------

nonprovisional NO \$1510 \$0 \$0 \$1510 05/03/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
----------	----------	----------------

ATALA, JAMIE JO 2621 386-124000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/679,069

10/05/2000

Chong-Mok Park

1317.1068

7738

21171

7590

02/03/2010

STAAS & HALSEY LLP

SUITE 700

1201 NEW YORK AVENUE, N.W.

WASHINGTON, DC 20005

EXAMINER

ATALA, JAMIE JO

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 02/03/2010

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1529 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1529 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability**

Application No.

09/679,069

Examiner

JAMIE JO ATALA

Applicant(s)

PARK, CHONG-MOK

Art Unit

2621

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/30/09.
2. ☒ The allowed claim(s) is/are 1-18,20-32 (renumbered 1-31).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material         | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michelle Koeth on January 20, 2010.

Regarding Claim **1** limitation should be amended to add the following underlined amendment to the pending claim:

A video stream processing method in a broadcast receiving system for time-delayed viewing, which includes disks having control information required for recording an input signal and reproducing recorded information recorded and a drive for driving the disks, the video stream processing method comprising:

using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in a circular buffer, based on the control information when a time-delayed viewing mode is selected; and

recording video streams for time-delayed viewing in the assigned circular buffer blocks, wherein physical blocks are indicated to be free blocks in the control information, and wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.

Regarding Claim **4** is cancelled.

Regarding Claim **9** limitation should be amended to add the following underlined amendment to the pending claim:

A video stream processing method in a broadcast receiving system for time-delayed viewing, which includes a hard disk drive having control information required for recording an input signal and reproducing recorded information recorded in a predetermined area, the video stream processing method comprising:

using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in a circular buffer and recording video streams for time-delayed viewing in the assigned circular buffer blocks, based on the control information when a time-delayed viewing mode is selected; and

assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free blocks nearest to the recorded free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer blocks,

wherein physical blocks are indicated to be free blocks in the control information, and wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.

Regarding Claim **12** limitation should be amended to add the following underlined amendment to the pending claim:

A video stream processing method in a broadcast receiving system for time-delayed viewing, which includes a hard disk drive having control information required for recording an input signal and reproducing recorded information recorded in a predetermined area, the video stream processing method comprising:

using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in a circular buffer and recording video streams for time-delayed viewing in the assigned circular buffer blocks, based on the control information when a time-delayed viewing mode is selected;

assigning free blocks of the disk recording area, recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks, assigning free blocks nearest to the recorded free blocks as the circular buffer blocks, and recording video streams for time-delayed viewing in the assigned circular buffer blocks, when a recording mode is selected together with the time-delayed viewing mode; and

reading free blocks to be reproduced based on the control information, assigning free blocks nearest to the reproduced free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer blocks, when a reproduction mode is selected together with the time-delayed viewing mode,

wherein physical blocks are indicated to be free blocks in the control information, and wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.

Regarding Claim **14** limitation should be amended to add the following underlined amendment to the pending claim:

A video stream processing method in a broadcast receiving system for time-delayed viewing, which includes a hard disk drive having control information required for recording an input signal and reproducing recorded information in a predetermined area, the video stream processing method comprising:

using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in a circular buffer and recording video streams for time-delayed viewing in the assigned circular buffer blocks, based on the control information when a time-delayed viewing mode is selected; and

reading blocks to be reproduced based on the control information, assigning free blocks nearest to the reproduced free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer blocks, when a reproduction mode is selected together with the time-delayed viewing mode,

wherein physical blocks are indicated to be free blocks in the control information, and wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.

Regarding Claim **15** limitation should be amended to add the following underlined amendment to the pending claim:

A video stream processing method in a broadcast receiving system for time-delayed viewing, which includes a hard disk drive having control information required for recording an input signal and reproducing recorded information in a predetermined area, the video stream processing method comprising:

- using a processor to assign free blocks of a recording disk area;
- recording video streams of a channel to be recorded in the assigned free blocks;
- assigning free blocks nearest to the recorded free blocks as logical blocks in a circular buffer; and

- recording the video streams for time-delayed viewing in the assigned circular buffer blocks,

- wherein physical blocks are indicated to be free blocks in the control information, and wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.

Regarding Claim **16** limitation should be amended to add the following underlined amendment to the pending claim:

A video stream processing method in a broadcast receiving system for time-delayed viewing, which includes a hard disk drive having control information required for recording an input signal and reproducing recorded information in a predetermined area, the video stream processing method comprising:

- reading blocks to be reproduced based on the control information;
- using a processor to assign free blocks nearest to the reproduced free blocks as logical blocks in a circular buffer; and

- recording video streams for time-delayed viewing in the assigned circular buffer blocks, wherein physical blocks are indicated to be free blocks in the control information, and wherein the control information comprises file attribute information, file assignment



information, free block information for each track, and circular buffer block information.

Regarding Claim **17** limitation should be amended to add the following underlined amendment to the pending claim:

A video stream processing method in a broadcast receiving system, the video stream processing method comprising:

recording a video stream in free blocks of a disk recording area or reading a recorded video stream recorded in the disk recording area; and

using a processor to assign free blocks nearest to the recorded or reproduced free blocks as logical blocks in a circular buffer,

wherein physical blocks are indicated to be free blocks in control information, and  
wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.

Regarding Claim **18** limitation should be amended to replace and add the following underlined amendment to the pending claim:

A non-transitory recording medium in a broadcast receiving system having a hard disk drive, the recording medium comprising:

a video stream storing area which records video streams, comprising:

video stream blocks which are physically discontinuously arranged and assigned sequentially within a circular buffer, and which are used to record video streams for time-delayed viewing; and

free blocks which are logically assignable to the circular buffer, or which record other video streams during a mode other than a time-delayed viewing mode; and

a control information area which stores control information relating to the video stream storing area,

wherein the video stream blocks are arranged physically discontinuously based on the control information stored in the control information area,

wherein physical blocks are indicated to be free blocks in the control information, and  
wherein the control information comprises file attribute information, file assignment

information, free block information for each track, and circular buffer block information.

Regarding Claim **19** is cancelled.

Regarding Claim **21** limitation should be amended to add the following underlined amendment to the pending claim:

A broadcast receiving system, comprising:  
a hard disk drive having a hard disk as a recording medium, the recording medium having control information for recording an input signal and reproducing recorded information;  
and

a controller which assigns physically discontinuous free blocks in a disk recording area to sequential logical blocks in a circular buffer, based upon the control information in response to a time-delayed viewing mode being selected, and which records video streams for time-delayed viewing in the assigned circular buffer blocks,

wherein physical blocks are indicated to be free blocks in the control information, and  
wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.

Regarding Claim **32** limitation should be amended to add the following underlined amendment to the pending claim:

A broadcast receiving system, comprising:  
a hard disk drive having a hard disk as a recording medium, the recording medium having control information for recording an input signal and reproducing recorded information;

a controller which records a video stream in physical free blocks of the recording medium or reads a recorded video stream recorded on the recording medium and assigns physical free blocks nearest to the recorded or reproduced physical free blocks as logical circular buffer blocks based on the control information,

wherein physical blocks are indicated to be free blocks in the control information, and  
wherein the control information comprises file attribute information, file assignment

information, free block information for each track, and circular buffer block information.

***Allowable Subject Matter***

2. Claims 1-3, 5-18, and 20-32 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The prior art of teaches and discloses a system for having physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected (McIlvain et al - US 5,765,200) and furthermore comprise free blocks of data (Barton et al - US 6,233,389); however, fails to disclose **wherein physical blocks are indicated to be free blocks in the control information, and wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information.**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE JO ATALA whose telephone number is (571)272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/JAMIE JO ATALA/  
Examiner, Art Unit 2621